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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,125	05/06/2004	Steve Ming Ting	TSM03-0945	7245
43859 7590 07/12/2007 SLATER & MATSIL, L.L.P. 17950 PRESTON ROAD, SUITE 1000 DALLAS, TX 75252			EXAMINER CRANE, SARA W	
			ART UNIT 2811	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/840,125	<b>Applicant(s)</b> TING ET AL.	
	<b>Examiner</b> Sara W. Crane	<b>Art Unit</b> 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-33 is/are pending in the application.
- 4a) Of the above claim(s) 29-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant has elected claims 16-28 for prosecution, in the response of 4/24/2007, including claims 16-23 drawn to species I, and generic claims 24-28.

### ***Specification***

The amendments filed 12/22/2006 and 4/24/2007 are objected to under 35 U.S.C. 132(a) because they introduce new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

1. In paragraph [0025], as amended 12/22/2006, the amendment "such that the notched spacer is thinner along the surface of the substrate, as illustrated in FIG. 1j," is new matter.

2. In the drawings as amended 12/22/2006 and 4/24/2007, FIG 1j, showing spacer layers 132 having thinner regions along the side of the gate electrode and the gate dielectric, is new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 16-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 16, as amended on 6/29/2006, the step of forming a notched spacer alongside the gate electrode, "such that a thickness of the notched spacer alongside the gate electrode is thinner near the substrate," is not taught in the specification as originally filed. Paragraph [0025], as originally filed, states that a portion of the first dielectric layer 126 may remain on the side of the gate electrode 122, but this sentence says nothing about the thickness of the portion of the dielectric layer that remains, and does not teach that the thickness of the spacer is thinner near the substrate. Claim 16, as originally filed, says that a notched spacer is formed that is "thinner along the surface of the substrate," which is not entirely clear (and appears to describe an L-shaped spacer). This certainly does not state that the notched spacer is thinner alongside the gate electrode near the substrate.

Claim 24, as amended on 6/29/2006, states that the etching process removes "at least a portion of the first layer along the surface of the substrate." There is no support in the specification for removing "a portion" of the first layer along the substrate. The figures and specification as originally filed teach to remove all of the first layer that lies along the substrate, and not simply a portion. Compare figure 1d and 1e, for example.

### ***Conclusion***

Applicant notes that the amendments to the specification and drawings submitted 12/22/2006 would provide support for the claim limitations of claims 16 and 24 found objectionable above. But support for the claim amendments must be found in the original filing, not in amendments subsequently presented. Applicant also notes that claim 24 recites, "thereby forming a notch in the notched spacer alongside the gate electrode near the substrate." This phrase was added by amendment on 6/29/2006, and is not part of the originally filed subject matter. And, as noted above, the notch shown in the figures as originally filed would be as in figure 1E, for example, where all of layer 126 along the substrate is removed, and not simply a portion of the layer along the substrate. A teaching of removing all of the layer along a surface of a substrate does not provide support for removing only a portion of the layer along a surface of a substrate.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

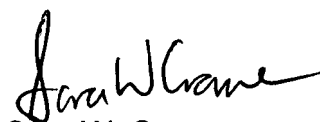
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (571) 272-1652.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sara W. Crane  
Primary Examiner  
Art Unit 2811